

# PATENT SPECIFICATION



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## COMPLETE SPECIFICATION.

### Improvements in Toothbrushes.

I, ALEXANDER SAXE, Salesman, a citizen of the United States of America, of 100, Fifth Avenue, in the City, County and State of New York, United States of America, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

10 This invention relates to that type of tooth brush wherein the head or bristle carrying member is rotatable in relation to the handle, and the principal objects of this invention are to provide a device  
15 having no metallic parts, a device that will be simple in operation, cheap in construction and yet efficient and one that will be no less sanitary than the ordinary well known type of tooth brush of rigid  
20 construction, and consists of a minimum number of parts.

I am aware that it has already been proposed to provide a tooth brush having a carrier pivoted on a vertical pin which  
25 is fixed in the handle, said handle being provided on its under side with corrugations or the like, engaging corresponding corrugations or the like in a spring plate fixed in the carrier.

30 It has also been proposed in a tooth brush of the type described, to provide as means for the prevention of relative rotation of the brush head with the handle, a disc fixed to the connecting piece of the  
35 brush body containing recesses into which spring actuated longitudinally moving pins on the handle engage.

The present invention differs from the above in that it consists in a tooth brush  
40 having in combination a handle and a bristle carrying part adapted for rotation relative to said handle, a plurality of projections formed on said handle, and a resilient projection produced by slots cut  
45 in the said bristle carrying part and bent outwardly from the plane thereof to engage the projections on said handle so as to prevent said rotation.

In the drawing:—

Fig. 1 is a side elevation of a complete 50 tooth-brush.

Fig. 2 a sectional view through the head and part of the handle.

Fig. 3 a side elevation of a modification.

Fig. 4 an end elevation thereof. 55

Fig. 5 is a plan view.

Similar reference numerals indicate like parts in all the figures where they appear.

The handle of this device may be of any shape or length. The end to which  
60 the bristle carrying member is attached may be disc shaped, a centrally disposed perforation extending transversely there-through. In the drawing the handle portion is indicated by the reference character 6, the disc shaped member by the  
65 reference character 7 and the perforation by the reference character 8 and may in all instances be similar if desired. At one side of the disc shaped portions 7 are  
70 a plurality of projections 9, 10, 11 and 12 spaced apart to produce recesses 13, 14 15 and 16 and which are shown in detail though in dotted lines in Fig. 5.

The head or bristle carrying portion 75 consists of a box member or casing 17 of any desired shape, but which I prefer should be of the general shape shown in Fig. 5. This member should be formed of a flexible somewhat resilient material  
80 such as celluloid, in fact I prefer that all parts of this device except the bristles should be of celluloid. In the top of this member I produce a perforation and a  
85 plurality of slits which result in the production of the tongues 18 and 19, the free end of the tongue 19 forming a portion of the wall of the center perforation.

The tongue 18 should be pressed outward from the plane of the top and if the  
90 device is formed of celluloid, the member 17 should be heated, the tongue pressed out and then retained during the cooling so that its normal position will be  
95 outward.

Extending through the perforation in

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the box member and into the perforation 8 in the handle is a stud or pin member 20 having an enlarged head 21 within the member 17. This member may be retained in the perforation by the tongue 19 which may also be pressed slightly outward to allow the head 21 or the pin or pivot to be introduced through the cavity formed by this displacement of 19, and the perforation; the cavity closing by the subsequent return of 19 to normal position thus enabling me to secure the bristle supporting base or member 22 in the box member 17 prior to the introduction of the pivot 20.

The handle may be rotated upon the pivot 20 and when one of the notches 13 to 16 inclusive engage the tongue 18, further rotation will be prevented until this tongue is depressed to allow the abutment or projection adjacent the notch to pass the tongue 18. In Figs. 3 and 4 I show the corners of the abutment or projections 9 to 12 inclusive as rounded so as to allow them to pass over the tongue 18 without the necessity of depressing the tongue. It is possible to omit the tongue 19 by inserting the pin or pivot 20 before the bristle carrying member 22 is secured in place, and other modifications may be made within the scope of the appended claims without departing from the principle or sacrificing the advantages of the invention.

Having now particularly described and

ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A tooth brush having in combination a handle and a bristle carrying part adapted for rotation relative to said handle, a plurality of projections formed on said handle, and a resilient projection produced by slots cut in said bristle carrying part and bent outwardly from the plane thereof to engage the projections on said handle so as to prevent said rotation.

2. A tooth brush as claimed in Claim 1 having a bristle carrying part provided with a perforation, a projection entering said perforation, and a second resilient projection adjacent to said perforation, said second projection being formed integral with said bristle carrying part.

3. A tooth brush, as claimed in Claim 2, wherein the ends of the projections of said handle are rounded to depress the resilient projection extending from the bristle carrying part formed integral therewith.

4. A tooth brush, substantially as described and shown, and for the purpose set forth.

Dated this 3rd day of January, 1922.

For the Applicant,

FRANK B. DEHN,

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53, Doughty Street, London, W.C. 1.

[This Drawing is a reproduction of the Original on a reduced scale.]

